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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/755,664 | 01/05/2001 | Thomas Miller | 328 P 530 | 4946 |

7590 10/25/2005

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| EXAMINER |
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DABNEY, PHYLESHA LARVINIA

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| ART UNIT | PAPER NUMBER |
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2646

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,664

Applicant(s)

MILLER ET AL.

Examiner

Phylesha L Dabney

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 18-33 and 41-46 is/are rejected.
- 7) ☒ Claim(s) 11-17 and 34-40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the application filed on 8 January 2001 in which claims 1-45 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 7, 10, 28-30, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Halteren et al (U.S. Patent No. 5,757,947).

Regarding claims 1-3, 10, 28-30, 33 van Halteren'947 teaches a receiver (figs. 1-5), comprising: an armature (11, 13); a diaphragm (2); and a closed loop (15-19) having an opposing first expanded and a second expanded regions, wherein the armature is operably attached to the first expanded region (lower area of 15-19) and the diaphragm (upper area of 15-19) is operably attached to the second expanded region.

Regarding claims 4 and 7, van Halteren'947 teaches the closed loop is comprised of a strap/wire (15).

2. Claims 18-21, 24, 41-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Halteren et al (U.S. Patent No. 5,809,158).

Regarding claim 18-20 and 41-43, van Halteren '158 teaches a receiver (figs. 1-5), comprising: an armature (11, 13); a diaphragm (2); an elliptical-like shaped spring (15-19) having a first axis and a second axis, each of the axes having a distal and a proximate end; the diaphragm operably attached to the elliptical-like shaped spring near the distal end of the second axis of the elliptical spring; and the armature operably attached to the elliptical-like shaped spring near the proximate end of the second axis of the elliptical spring.

Regarding claims 21, 24, and 44, van Halteren '158 teaches the elliptical-like shaped spring is comprised of a strap/wire (15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-6, 8-9, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Halteren '947.

Regarding claims 5, 8, and 31, van Halteren '947 does not teach the strap/wire is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals, such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

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Regarding claims 6 and 32, van Halteren'947 does not teach or exclude the shape of the strap to being a thickness ranging from 5×10^{-4} to 3×10^{-3} inch and a width ranging from 10×10^{-3} to 20×10^{-3} inch. However, the examiner takes official notice that it is known to use a strap with minimal thickness and width to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a thickness ranging from 5×10^{-4} to 3×10^{-3} inch and a width ranging from 10×10^{-3} to 20×10^{-3} inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

Regarding claim 9, van Halteren'947 does not teach the teach or exclude the shape of wire to being a diameter having a range of 2.0×10^{-3} to 5.0×10^{-3} inch. However, the examiner takes official notice that it is known to use a wire with minimal diameter to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a diameter having a range of 2.0×10^{-3} to 5.0×10^{-3} inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

4. Claims 22-23, 25-27, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Halteren '158.

Regarding claims 22, 25, and 45, van Halteren'158 does not teach the strap is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals,

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such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

Regarding claims 23 and 46, van Halteren'158 does not teach or exclude the shape of the strap to being a thickness ranging from 5×10^{-4} to 3×10^{-3} inch and a width ranging from 10×10^{-3} to 20×10^{-3} inch. However, the examiner takes official notice that it is known to use a strap with minimal thickness and width to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a thickness ranging from 5×10^{-4} to 3×10^{-3} inch and a width ranging from 10×10^{-3} to 20×10^{-3} inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

Regarding claim 26, van Halteren'158 does not teach or exclude the shape of wire to being a diameter having a range of 2.0×10^{-3} to 5.0×10^{-3} inch. However, the examiner takes official notice that it is known to use a wire with minimal diameter to fit the compact size of a hearing aid receiver and minimize the mechanical effects on the overall resonant frequency of the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a strap of any size not to exclude a diameter having a range of 2.0×10^{-3} to 5.0×10^{-3} inch for beneficially fitting within the compact hearing aid and minimizing mechanical effects.

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Regarding claim 27, van Halteren'158 teaches the elliptical-like shaped spring is comprised of stainless steel. However, it is known to make hearing aid transducer parts of various metals, such as stainless steel, etc, to prolong life of the transducer and minimize corrosion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal such as stainless steel in the invention of van Halteren to prolong life of the transducer and minimize corrosion effects.

Allowable Subject Matter

5. Claims 11-17, 34-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 29, 2004

PLD



SINH TRAN
SUPERVISORY PATENT EXAMINER